

**HOFMANN  
ENGINEERING**

# MILL & KILN PINIONS

*Since 1969 Hofmann Engineering has provided specialist engineering services to Australia's industry leaders.*

*Quality Assurance accreditation by Bureau Veritas complements our total quality culture.*

*Our commitment to continuous quality-improvement touches every aspect of our products, services and customer support.*

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## **PINIONS**

1. Through-Hardened.
2. Induction-Hardened.
3. Case-Carburised.
4. HofCarb Carburised.
5. Self-Aligning.

## **CAPACITY**

- Size - 1.6m face x 6m lg.
- Hardness - to 62 HRC.
- Quality - AGMA14 (DIN 4).

# Pinion Rating Comparison

## Same Size But Different Hardness And Quality

|   | SOFT<br>QUENCH & TEMP   |             | INDUCTION HARD &<br>GROUND  |                         | CARBURISED &<br>GROUND  |                        | HOFCARB &<br>GROUND  |                        | CARBURISED &<br>SELF ALIGNING   |                        |
|---|---|-------------|---|-------------------------|---|------------------------|--|------------------------|---|------------------------|
| Material  | AISI 4340   | M<br>a<br>x | AISI 4340   | M<br>a<br>x             | Din 17CrNiMo6   | M<br>a<br>x            | Din 17CrNiMo6  | M<br>a<br>x            | Din 17CrNiMo6   | M<br>a<br>x            |
| Heat Treatment<br>Hardness  | Quench & Temp<br>290 BHN  | 420 BHN     | Induction Hardened<br>Core = 300 BHN<br>Case = 56 RC<br>Depth = 7 mm              | 400 BHN<br>60RC<br>10mm | Gas Carburised<br>Core =400 BHN<br>Case = 60 RC<br>Depth = 5 mm                   | 420 BHN<br>62RC<br>6mm | Gas Carburised<br>Core =400 BHN<br>Case = 60 RC<br>Depth = 5 mm                    | 420 BHN<br>62RC<br>6mm | Gas Carburised<br>Core =400 BHN<br>Case = 60 RC<br>Depth = 5 mm                     | 420 BHN<br>62RC<br>6mm |
| Quality<br>Machining  | AGMA 10 (DIN 8)<br>Hobbed   | 11          | AGMA 12 (DIN 6)<br>Ground   | 15                      | AGMA 12 (DIN 6)<br>Ground   | 15                     | AGMA 12 (DIN 6)<br>Ground  | 15                     | AGMA 12 (DIN 6)<br>Ground   | 15                     |
| Pictures depict typical<br>pinion types being<br>manufactured by<br>Hofmann Engineering |  |             |  |                         |  |                        |  |                        |  |                        |
| Example   |   |             |   |                         |   |                        |  |                        |   |                        |
| <b>Power Details</b>  |   |             |   |                         |   |                        |  |                        |   |                        |
| Power (kW)  | 3500  |             |   |                         |   |                        |  |                        |   |                        |
| Speed (RPM)   | 188   |             |   |                         |   |                        |  |                        |   |                        |
| <b>Geometry</b>   |   |             |   |                         |   |                        |  |                        |   |                        |
| Module Mn   | 25.4  |             | Mn max = 100  |                         | Mn max = 32   |                        | Mn max = 32  |                        | Mn max = 32   |                        |
| Pressure Ang α  | 25°   |             | α max = 45°   |                         | α max = 45°   |                        | α max = 45°  |                        | α max = 45°   |                        |
| Helix Angle β   | 0   |             | β max = 45°   |                         | β max = 45°   |                        | β max = 45°  |                        | β max = 45°   |                        |
| Nos Teeth Z   | 25  |             | Z max = 600   |                         | Z max = 600   |                        | Z max = 600  |                        | Z max = 600   |                        |
| Face Width F  | 700   |             | F max = 2500 mm   |                         | F max = 1200 mm   |                        | F max = 1200 mm  |                        | F max = 1200 mm   |                        |
| Overall Length L  | 3200  |             | L max = 12000 mm  |                         | L max = 6000 mm   |                        | L max = 3700 mm  |                        | L max = 3700 mm   |                        |
| Outside Dia da  | 701   |             | da max = 8000 mm  |                         | da max = 3000 mm  |                        | da max = 1900 mm   |                        | da max = 1900 mm  |                        |
| Weight (Kg) W   | 4000  |             | W max = 100 tonne   |                         | W max = 20 tonne  |                        | W max = 20 tonne   |                        | W max = 20 tonne  |                        |
| <b>% Price</b>  | 100%  |             | 120%  |                         | 140%  |                        | 140%   |                        | 160%  |                        |
| <b>Delivery</b>   | 18 weeks  |             | 21 Weeks  |                         | 21 Weeks  |                        | 21 Weeks   |                        | 24 Weeks  |                        |
| <b>AGMA 6004</b>  |   |             |   |                         |   |                        |  |                        |   |                        |
| <b>Pitting Csf</b>  | 1.21  |             | 2.77  |                         | 3.53  |                        | 4.27   |                        | 4.72  |                        |
| <b>Strength KsF</b>   | 2.05  |             | 2.48  |                         | 2.76  |                        | 2.9  |                        | 3.2   |                        |

### Large Pinion Rating Comparison

